# ABSTRACT

A dynamically re-configurable multi-stroke internal combustion engine, comprised of programmable computer processor controlled engine components for decoupling the four classic strokes of an internal combustion engine and electronically managing engine cylinder components including such cylinder components as electronically controllable valves, fuel injection and air fuel mixture ignition, allowing additional engine cylinder unit component states and thus cylinder strokes to be independently altered or re-sequenced by computer control to provide alternate engine modes of operation. Some alternate engine modes are facilitated by addition of a compressed air storage reservoir to receive cylinder generated compressed air or transfer compressed air to cylinder units in other modes to increase engine power, efficiency or utility. Sensor input and on-demand requirements drive control logic to manage engine strokes through control of individual cylinder component states. Dynamic reconfiguration of individual component states provides re-generative engine energy modes, boost power modes, and mixed modes which use compressed air stored energy re-introduced for alternate cylinder state sequences and alternate engine modes of operation which add utility and efficiency to otherwise fixed sequence multi-stroke power generation in internal combustion engines.

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